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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,383	07/26/2002	Wunibald Frey	10191/2344	5178
26646	7590	09/17/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			TIBBITS, PIA FLORENCE	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,383

Applicant(s)

FREY ET AL.

Examiner

Pia F Tibbits

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/18/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2838

DETAILED ACTION

This Office action is in answer to the preliminary amendment filed 7/26/2002. Claims 1-12 were deleted, while claims 13-28 were added.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated [see instant specification]. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, one of the consumers (that includes at least one microprocessor), the satellite (wireless) signal distributor, the consumer (configured to carry a current), power circuit-breaker, etc. must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may

Art Unit: 2838

be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The entire disclosure is a translation of a foreign document, which should be revised carefully in order to facilitate finding support, as well as to provide proper antecedence for all claimed limitations.

For example:

on page 6 "R16" should be replaced by ---RK---.

the statement "Signal-power distributor SLV1 of converter W2 is then connected to other signal-power distributors SLV2 through SLVn and thus forms a master SLV15 which protects satellite signal-power distributors SLV2 through SLVn" fails to describe why satellite signal-power distributors are part of the on-board (vehicle) system.

the statement in the specification "Because of the selected arrangement, no inversely switched additional power circuit-breakers are needed" contradicts claim 24 that claims a power circuit-breaker.

claim 17: the statement "the at least one consumer including the at least one microprocessor distributes electric power" is confusing since, according to this statement, the consumer **is** the distributor.

claim 21: "a master signal-power distributor to one of control and protect the at least one satellite signal-power distributor".

Depending on the number of changes made to the entire disclosure to correct the grammatical and idiomatic errors, it may be more efficient to file a substitute specification in accordance with MPEP 608.01(q). If applicant decides to do so, the substitute specification filed must be accompanied by a statement that it contains no new matter. Such statement must be a verified statement if made by a person not registered to practice before the Office.

Art Unit: 2838

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter: "preselectable property"; "consumer configured to carry a current", etc. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction is required.

6. The title of the invention is not descriptive, i.e., a wiring loom is not even mentioned in the disclosure. A new title is required that is clearly indicative of the invention to which the claims are directed.

The above are but a few specific examples of objections to the disclosure, and are only intended to illustrate the extensive revision of the disclosure. The above-mentioned corrections therefore, are in no way a complete and thorough listing of every objection to the disclosure. Applicant is required to revise all of the disclosure completely, and not just correct the objections mentioned.

7. No rejection based on prior art is given at this point of prosecution to claims 19, 21. MPEP 2173.06 states: *"...where there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of a claim, it would not be proper to reject such a claim on the basis of prior art. As stated in **In re Steele**, 305 F.2d 859, 134 USPQ 292 (CCPA 1962), a rejection under 35 U.S.C. 103 should not be based on considerable speculation about the meaning of terms employed in a claim or assumptions that must be made as to the scope of the claims."* Given the great deal of confusion and uncertainty as to the proper interpretation of the limitations of claims, it would not be proper to reject claims 19 on the basis of prior art.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2838

9. Claims 13-15, 17, 20, as best as it can be understood at this time, are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art disclosed by applicant, **Schenk et al.** [hereinafter Schenk][5907194] in view of **Neuhaus** [5416401].

At the outset, the examiner notes that claims are to be given their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process."). In responding to this Office action, applicants are reminded of the requirements of 37 CFR 1.111 and 1.119 that applicants specifically point out the specific distinctions believed to render the claims patentable over the references in presenting responsive arguments. See MPEP 714.02. The support of any amendments made should also be specifically pointed out. See MPEP 2163.06.

Schenk discloses in the drawing a multi-voltage on-board electrical system for providing at least a first voltage level and a second voltage level different from ground, comprising: a generator 10 for generating the first voltage level 42V; at least one voltage converter 21 for generating the second voltage level 12V from the first voltage level; a switching arrangement 12; consumers that are operable, via the switching arrangement, with one of the first voltage level and the second voltage level; and one microprocessor 15 assigned to the at least one voltage converter [see also the drawing; the abstract; column 1, lines 40-63; column 3, line 4 and lines 17-21; column 4, lines 27-31]. Schenk does not disclose an arrangement for providing a short circuit protection, the arrangement configured to at least one of

Art Unit: 2838

reduce a risk of a short circuit between the first voltage level and the second voltage level and minimize an effect of the short circuit.

Neuhaus discloses in figures 1 and 2 using fuses in a multi-voltage on-board electrical system so that a malfunction, such as a short circuit in one electrical energy storage device, will not have an adverse effect on the other electrical energy storage device [see also column 1, lines 36-44]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schenk's apparatus and include fuses, as disclosed by Neuhaus, in order to avoid a malfunction, such as a short circuit in one electrical energy storage device, to have an adverse effect on the other electrical energy storage device.

As to claim 14, the functional recitation "for providing the short circuit protection is further configured to protect an at-risk consumer in an event of the short circuit" has not been given patentable weight because it is narrative in form.

As to claim 15, Schenk discloses a dual-voltage on-board electrical system in a motor vehicle, 42V and 17V [see also column 4, lines 11-19].

As to claim 17, Schenk discloses that the power control unit includes one component group, such as a microprocessor 15, known as on-board electrical system management and diagnostics and that controls the entire functional sequence [see also column 3, lines 17-21].

As to claim 20, Schenk discloses controlled rectifiers 16 and 17 [see the drawing].

10. Claims 16, 22, 23, as best as it can be understood at this time, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schenk** and **Neuhaus** in view of **Jabaji** [5907233].

Schenk and Neuhaus disclose a multi-voltage on-board electrical system for providing at least a first voltage level and a second voltage level different from ground, comprising: a generator for generating the first voltage level; at least one voltage converter for generating the second voltage level from the first voltage level; a switching arrangement; consumers that are operable, via the switching arrangement, with one of the first voltage level and the second voltage level; and an arrangement for providing a short circuit protection, the arrangement configured to at least one of reduce a risk of a short

Art Unit: 2838

circuit between the first voltage level and the second voltage level and minimize an effect of the short circuit. Schenk and Neuhaus disclose a first battery having a nominal voltage of 12V; and a second battery having a nominal voltage of 42V. Schenk and Neuhaus do not disclose an overvoltage disconnect.

Jabaji discloses a microprocessor-based voltage regulator for a generator controlling an overvoltage relay, where the microprocessor generates a warning signal in the event of a non-standard operating condition such as drifting voltage regulation, disconnected batteries, or thermal limits that approach shut down, and controls an overvoltage relay [see also fig.1; the abstract; column 3, lines 27-28]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schenk's and Neuhaus's apparatus and include overvoltage protection, as disclosed by Jabaji, in order to avoid a temperature-dependent irreversible deterioration of the batteries.

As to claim 22: the description in the specification was used to interpret in order to continue prosecution "Since this period of time is not infinitely short, the sacrificial consumer should be designed accordingly so that it is not damaged by the overvoltage or the resulting current, one possibility is to insert an overvoltage protection element such as an active surge voltage protector similar to a load-dump protector which keeps the voltage within a defined range". With regard to the particular location of the overvoltage protection, i.e., at the consumer's, absent any criticality, is only considered to be an obvious modification as it has been held by the courts that there would be no invention in shifting the location of a structure of a device to another location if the operation of the device would not thereby be modified. *In re Japikse*, 86 USPQ 70. Official Notice is taken with regard to the surge voltage protector since it is well known in the art to use a surge voltage protector in order to avoid a temperature-dependent irreversible deterioration due to an electric surge.

As to claim 23, Jabaji discloses that the microprocessor generates a warning signal in the event of a non-standard operating condition.

11. Claims 18, 28, as best as it can be understood at this time, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schenk** and **Neuhaus** in view of **Gillespie et al.** [hereinafter Gillespie] [6393573].

Art Unit: 2838

To continue prosecution, the signal-power distributor was interpreted in light of the specification, which describes: "the consumers that are to be supplied with voltage are connected to generator G via signal-power distributor V1".

Schenk and Neuhaus disclose a multi-voltage on-board electrical system for providing at least a first voltage level and a second voltage level different from ground, comprising: a generator for generating the first voltage level; at least one voltage converter for generating the second voltage level from the first voltage level; a switching arrangement; consumers that are operable, via the switching arrangement, with one of the first voltage level and the second voltage level; and an arrangement for providing a short circuit protection, the arrangement configured to at least one of reduce a risk of a short circuit between the first voltage level and the second voltage level and minimize an effect of the short circuit. Schenk and Neuhaus disclose a first battery having a nominal voltage of 12V; and a second battery having a nominal voltage of 42V. Schenk and Neuhaus do not disclose one microprocessor configured to control at least one other signal-power distributor.

Gillespie discloses a power management system for a vehicle including a network interface 32 contained in VIOP 12 and connected to microprocessor 25. Network interface 32 may be connected to a vehicle network for exchanging data and control signals between motherboard 13 and a vehicle communication or multiplex network (also using the serial communication link between motherboard 10 and VIOP 12) in order to reduce vehicle battery consumption while reducing typical boot-up time of an automotive multimedia computer-based system [see also the abstract; column 1, lines 10-14; column 4, lines 6-11]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schenk's and Neuhaus's apparatus and include a power management system, as disclosed by Gillespie, in order to reduce vehicle battery consumption while reducing typical boot-up time of an automotive multimedia computer-based system.

As to claim 28, Gillespie discloses a power management system.

Art Unit: 2838

12. Claims 24-27, as best as it can be understood at this time, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schenk, Neuhaus, and Jabaji** in view of prior art disclosed by applicant, **EP-632558** [hereinafter EP].

Schenk, Neuhaus and Jabaji disclose a multi-voltage on-board electrical system for providing at least a first voltage level and a second voltage level different from ground, comprising: a generator for generating the first voltage level; at least one voltage converter for generating the second voltage level from the first voltage level; a switching arrangement; consumers that are operable, via the switching arrangement, with one of the first voltage level and the second voltage level; an arrangement for providing a short circuit protection, the arrangement configured to at least one of reduce a risk of a short circuit between the first voltage level and the second voltage level and minimize an effect of the short circuit; and an overvoltage disconnect. Schenk, Neuhaus and Jubanji do not disclose an automatic resetting protection device to counter short circuits in the on board electrical system of motor vehicles.

EP discloses in the abstract and fig.3 a contact relay/TR4 is in series with a connection cable between the battery's positive pole and the branch point of the vehicle electrical system. A resistance is placed in parallel with current limitation resistance with positive temperature coefficient. A shunt is inserted in series to the relay for scanning a short-circuit current. A comparator senses maximum current with hysteresis to prevent cyclic opening/closing of relay/TR4 upon short-circuit. In cases of collision any short-circuit currents are interrupted. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schenk's and Neuhaus's apparatus and include overvoltage protection, as disclosed by Jubanji, in order to interrupt short-circuits.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

Art Unit: 2838

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Information Disclosure Statement

14. The information disclosure statement filed 7/26/2003 included DE-19845596, which discloses subject matter not connected to the instant application. It has been placed in the application file, but the information referred to therein has not been considered. Applicant to explain its relevance.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, as best as it can be understood at this time. The prior art cited in PTO-892 and not mentioned above disclose related apparatus, as best as it can be understood at this time.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is (571) 272-2086. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is (571) 272-2084. The Technology Center Fax number is (703) 872-9306.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

September 14, 2004

Pia Tibbits

Primary Patent Examiner

